



Preface

Conventions

Command-line interface (CLI) syntax descriptions use these conventions:

- Commands and keywords are in **boldface** text.
- Arguments for which you supply values are in *italic*.
- Square brackets ([]) mean optional elements.
- Braces ({ }) group required choices, and vertical bars (|) separate the alternative elements.
- Braces and vertical bars within square brackets ({ | }) mean a required choice within an optional element.

Interactive examples use these conventions:

- Terminal sessions and system displays are in `screen` font.
- Information that you enter is in **boldface screen** font.
- Nonprinting characters, such as passwords or tabs, are in angle brackets (< >).

Interactive examples use these conventions:



Note

Means *reader take note*. Notes contain helpful suggestions or references to materials not contained in this manual.

**Caution**

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

**Warning****IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS

Related Publications

Partner documents providing information about the management application programming interface (API) and the end-point software development kit (SDK) are available on the Cisco Developer Network at <http://developer.cisco.com/web/esdk/home>.

- *Cisco EnergyWise Documentation Roadmap*
- *Cisco EnergyWise Partner Development Guide*
- *Cisco EnergyWise Programmer Reference Guide for the End Point SDK*
- *Cisco EnergyWise Programmer Reference Guide for the Management API*
- *Release Notes for Cisco EnergyWise, EnergyWise Phase 2*

Obtaining Documentation and Support on the Cisco Developer Network

Cisco partners can access the EnergyWise documents, API and SDK software code, and Cisco IOS software by joining the Cisco Developer Network at <http://developer.cisco.com/web/esdk/home>.

You must have a support contract and license to access EnergyWise resources on the Cisco Developer Network and on TAC. The business development manager who registered your licence must set your Cisco.com account with the appropriate access privileges.

The forum, wiki, and resources on the Cisco Developer Network provide a self-help knowledge base and community for EnergyWise application developers and programmers. You can get additional support by opening a case in the TAC Service Request Tool at <http://tools.cisco.com/ServiceRequestTool/create/launch.do>.

Obtaining Documentation, Support, and Security Guidelines

For information on obtaining documentation, submitting a service request, and gathering additional information, see the monthly *What's New in Cisco Product Documentation*, which also lists all new and revised Cisco technical documentation, at

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed, and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS version 2.0.



CHAPTER 1

Installing Cisco EnergyWise Orchestrator

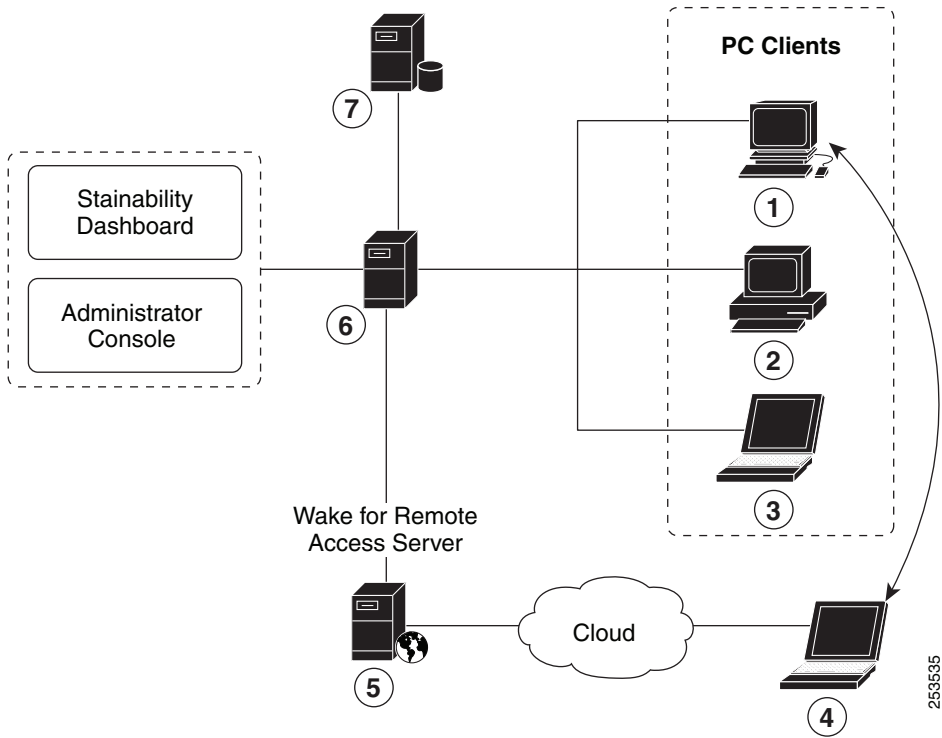
- [Cisco EnergyWise Orchestrator Wake for Remote Access Overview, page 1-1](#)
- [Preparing to Install WRA, page 1-3](#)
- [Installing WRA, page 1-4](#)

Cisco EnergyWise Orchestrator Wake for Remote Access Overview

Wake for Remote Access (WRA) is a component of the Cisco EnergyWise Orchestrator power management suite. Using the Wake on WAN technology, to enable members of your organization can access their computers when they are working offsite, even after their on-site computers have changed to a low power state.

Using a web browser and a web interface, users enter or search for their computer name, and click a button to send a request to the Orchestrator power management server to wake their computer. When the computer is awake, the user follows the established remote login procedures to access the computer.

Figure 1-1 Basic WRA Overview



1	Workstation	5	Microsoft IIS server
2	Desktop PC	6	Power Management server
3	Laptop PC	7	Microsoft SQL server
4	Home or remote laptop PC		



Tip

The users' on site computers must have the Orchestrator client agent installed, but they do not need to install it on their remote computers to use WRA.

System Requirements

- Microsoft Windows Server 2003 SP2 edition
- Microsoft Internet Information Services (IIS) 6.0
- Microsoft .NET 3.5 SP1
- A connection to a Cisco EnergyWise Orchestrator installation with Wake on WAN enabled and configured

For users displaying WRA to wake a computer, we recommend Internet Explorer 7 or 8 or a recent Firefox version is recommended.

Preparing to Install WRA

-
- Step 1** On the server that hosts IIS, confirm that the IIS service is running by opening a browser window and typing **http://localhost** in the address bar.
- If IIS is not running, use the Windows Start menu to open the IIS Manager and start the service.
- Step 2** Create a WRA user account that will communicate with the Orchestrator power management server to carry out the wake requests.
- You will need the name and password of this account during installation.
-

WRA Permissions Requirements

The user that you designate to run the WRA installer and service must have these permissions:

- If you use IIS 6 on Windows Server 2003, the user must also be a member of the IIS_WPG Windows group on the IIS server.
- Must belong to a security role that has Change Device State permissions on all relevant security groups that are set up in the Orchestrator Administrator console.

For information, see the “Security and Permissions in the Orchestrator System” section in the *Cisco EnergyWise Orchestrator Administrator Guide*.

Installing WRA

The setup program installs WRA and creates its virtual IIS directory.

Step 1 Unzip the WRA.zip distribution file and run the setup.exe file.

Step 2 Follow the instructions on the wizard pages, and note these pages on which you will need to enter information specific to your installation:

- Power Managment Server Info—Enter the computer name of the Orchestrator server that you want WRA to connect to.



Note The server name must be the computer name. Entering an alias causes errors when you try to use WRA.

- WRA ASP.NET Application User—Enter the domain and user name and password for the user that you created for the WRA service. Click **Next**.



Note The installer does not check the server or user name that you enter. However, invalid names will cause a *Service unavailable* error when you open the WRA home page after installation.

For information about establishing a user for the WRA service, see [“Preparing to Install WRA” section on page 1-3](#).

Step 3 On the Ready to Install the Program window, click **Install**.

The setup program creates an IIS virtual directory under wwwroot named wra and places the WRA files in that directory.

Step 4 Click **Finish** when the wizard is done.

Step 5 Open a browser and display the WRA home page (<http://YourServerName/wra>), and perform some test searches to confirm the connection.

To allow your users to wake their computers remotely through WRA, send them the home page URL.



CHAPTER 2

Configuring WRA

Customize WRA to do these things:

- Help users find their computers if they are not sure of the computer name, such as allowing wildcard searches.
- Configure parameters to comply with organizational IT policies, such as disabling browser cookies.
- Specify how many computers are returned in the search results.
- Modify the browser pages that users see to:
 - Match your organizational branding.
 - Modify the help tips to reflect application customizations you make or add other tips that would help your users.

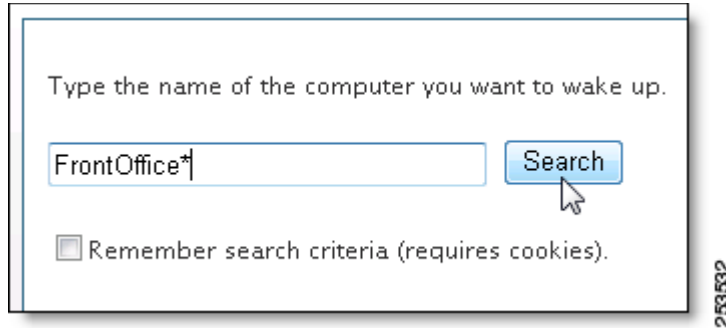
Customizing Application Parameters

- [Home Page Customizations, page 2-2](#)
- [Search Results Customizations, page 2-2](#)
- [How to Customize Application Settings in IIS Manager, page 2-3](#)
- [Application Settings and Descriptions, page 2-4](#)

Home Page Customizations

When users go to the WRA home page, they can enter search criteria to find the computer that they want to wake.

Figure 2-1 Search Form on the WRA Home Page



By default, these search features are enabled:

- Support for wildcard characters (* and _), for finding similar computer names.



Note By default, users must enter at least three characters in the search form. If they try to use a single asterisk to return all clients, they get a message to try again.

- The option to save the search criteria that the user last entered.

To disable either of these options or to change the minimum number of required characters and other parameters, see the [“How to Customize Application Settings in IIS Manager”](#) section on page 2-3.

Search Results Customizations

When users include wildcard characters in their searches, the first five matching computers are returned. If a computer is not listed, users can add more characters (not wildcards) and search again.

You can use the IIS Manager to change the maximum number of computers that are returned in search results. For information about customizing information returned with the results, see [“Customizing the WRA Browser Pages”](#) section on page 2-5.



Note

Search results return only computers on which a Orchestrator client agent is installed and licensed.

How to Customize Application Settings in IIS Manager

How you access application settings depends on which version of IIS you use.



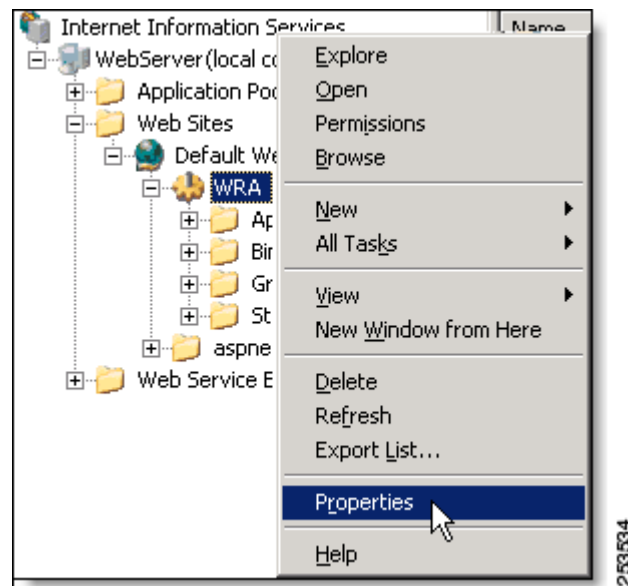
Note

For a description of each setting, see [“Application Settings and Descriptions”](#) section on page 2-4.

To Customize Search Options in IIS 6 Manager

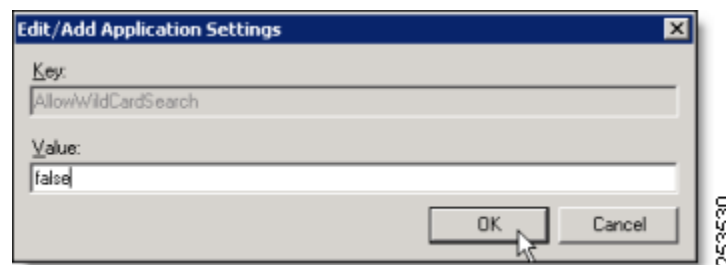
- Step 1** On the IIS server, open the IIS Manager from the Windows Start menu.
- Step 2** Right-click WRA, and choose **Properties**.

Figure 2-2 *Displaying the Properties of the WRA Site*



- Step 3** In the Properties dialog box, click the **ASP.NET** tab, and click **Edit Configuration**.
- Step 4** Customize the settings. See [“Application Settings and Descriptions”](#) section on page 2-4.

Figure 2-3 *Editing a WRA Application Setting*



Application Settings and Descriptions

Table 2-1 IIS Manager Settings

Setting	Description and Values
AllowWildCardSearch	Allows the * and _ wildcards in searches. The default is <i>true</i>. If set to <i>false</i>, users must enter the computer name. If you disable wildcards, edit the Tips content in the Default.aspx page so that it does not describe how to include wildcards in searches. For information, see the “Customizing the WRA Browser Pages” section on page 2-5.
AutoPing	Verifies that the computer is awake before sending the awake request. The default is <i>true</i>. For more information, see “Timeouts during the wake process” in the “Connection Issues” section on page 3-1.
MaxReturn	Maximum number of results displayed by the search. The default is 5.
MinSearchLength	Minimum number of characters to enter in the Search form. The default is 3 (including wildcards).
Refresh	Number of seconds to wait before refreshing the status on the wake results page. The default is 2. This setting excludes the page-loading time, so the actual refresh time can be longer than the specified time.
ServerName	Text string showing the power-management server for WRA communication.
ShowCookieCheckBox	Specifies whether to allow users to save their search criteria. Set to true by default. If you set this to false, the check box and label do not appear on the home page.
SupportText	Default message: “If you continue to receive this error, please contact your support department.” Note This message can be changed by the IIS manager. This message appears on the search results page if the WRA service has a problem communicating with the power management server when a user searches for a computer. This can occur, for example, if the server is offline, or the server name setting is not correct in the IIS Manager.
Timeout	Number of seconds to wait before determining that the computer is not reachable. The default is 9300. If you want to change this, we recommend using 1.5 times the <i>Device check-in interval</i> set on the Server settings page of the Orchestrator Administrator console (default is 10 minutes).

Customizing the WRA Browser Pages

WRA includes three pages that users can see on their browsers. If you have experience with XHTML and CSS, you can customize these pages. For example:

- Disable wildcard characters in searches and remove the *Tips* text that describes how to use them.
- Create pages that better reflect your company branding.
- Adjust information that appears in search results.

This section includes these topics:

- [Browser Page Location, page 2-5](#)
- [Editing Tip Text, page 2-5](#)
- [Editing Information Returned with Search Results, page 2-6](#)
- [Changing the Header and Logo, page 2-6](#)

Browser Page Location

The web pages are in the root of the WRA site: *Inetpub\wwwroot\wra*.

- Default.aspx (home page)
- SearchResults.aspx
- WakeResults.aspx

Each page has XHTML code that contains the Tip text and other page elements, including code that inserts the WRA application.

The header logo and title bar text for the browser window are specified in the MasterPage.master file.

The .css style sheet defines the header background image and other style and layout attributes.



Caution

Create a backup copy of the .aspx, .master, and .css files before you edit them. Edit them at your own risk. Cisco technical support cannot troubleshoot errors that you receive after customizing these pages.

Editing Tip Text

-
- | | |
|---------------|---|
| Step 1 | On the IIS server, go to <i>Inetpub\wwwroot\wra</i> , and open Default.aspx in a code or text editor. |
| Step 2 | Search for the text that you want to edit, and change it to reflect what you want your users to know, incorporating any XHTML code for the desired display. |
-

You can do the same to edit the Tip text on any of the pages that users see.

Editing Information Returned with Search Results

Search results include each computer name and IP and MAC addresses. The page also includes the option to wake or ping any listed computer.

If you want to restrict information that appears in search results, you need to edit the XHTML code that displays the information. For example, you can remove the Ping button or the IP or MAC address.

To remove information from the search results tables:

-
- Step 1** After you have created your backup copies of the .aspx files, on the IIS server, go to Inetpub\wwwroot\wra, and open SearchResults.aspx in a code or text editor.
- Step 2** Under <ItemTemplate>, look for the table row with the information that you want to remove, and delete that row.
- For example, to remove the IP address, remove this code block:
- ```
<tr>
<td>IP Address</td>
<td><%# DataBinder.Eval(Container.DataItem, "IP") %>
</td></tr>
```
- Step 3** Save and close the file, and then test the page to make sure your changes give the expected results.
- 

## Changing the Header and Logo

To do this, edit these files in Inetpub\wwwroot\wra:

- MasterPage.master  
You can remove or replace the logo and text that appear in the page header section.
- Styles\wra.css  
You can change the banner, body, or content background and customize colors, fonts, and other style and layout attributes.



## CHAPTER 3

# WRA Troubleshooting

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- [Connection Issues, page 3-1](#)
- [Search Results Issues, page 3-2](#)
- [Using the WRA Test Files for Troubleshooting, page 3-3](#)

## Connection Issues

### Windows 2003 Security Message

You might get a security message if you open the home page (Default.aspx) in Internet Explorer on a Windows 2003 computer that has the Internet Explorer Enhanced Security Configuration component enabled. The WRA site could be identified as an Internet, or untrusted, zone, and does not appear.

Use one of the following solutions:

- Add the WRA server URL to the intranet zone in Internet Explorer:
  - In IE, choose **Tools / Internet Options**, and on the Security tab, click **Local intranet**.
  - Click **Sites**, click **Advanced**, and add the WRA server URL to the intranet zone.
- Disable Internet Explorer Enhanced Security Configuration through the Control Panel, in the **Add/Remove Windows Components** section under Add/Remove Programs.

For more information, see [Microsoft Knowledgebase Article 303650](#).

## Timeouts During the Wake Process

The **Device check-in interval** setting on the Server Settings page in the Orchestrator Administrator console can affect how long a wake request takes if both of the following conditions are true:

- A computer is already awake when a user sends a wake request through WRA.
- and
- The AutoPing application setting is set to false. See the [“Application Settings and Descriptions” section on page 2-4](#)).

Under these conditions, if a user sends a wake request to a client through WRA shortly after the last check-in by the client, the wake process can take almost as long as the check-in interval.

By contrast, if the computer is asleep, it receives the wake request when the server makes the request available.

To resolve this issue, set `AutoPing` to `true`, which is the default.

**Note**

The wake-results page alerts the user that frequent timeouts can mean that the computer is awake. It suggests that the user try to log in normally.

## IIS Application Pool Unexpectedly Exits When a Worker Process Shuts Down or Is Recycled

This problem can occur if the user running the WRA service is not a member of the Windows group `IIS_WPG` on the IIS server. For information, see the [“WRA Permissions Requirements” section on page 1-3](#) and [Microsoft Knowledgebase Article 918041](#).

## IIS Application Error

An application error occurred on the server. The custom error settings prevent the details of the application error from being seen remotely for security reasons. It could, however, be displayed by browsers running on the local server machine.

To resolve this issue, display the web page from the computer on which WRA is installed or temporarily enable remote display of error details.

**Note**

Enabling remote display of error details might impact WRA performance and should only be used temporarily.

## Search Results Issues

### Duplicate computer names returned in search results

An user performs a search, and the results return more than one computer with the same name.

Open the Orchestrator Administrator console, and display the duplicate computers to see why there are two or more of them.

Most commonly, this issue occurs if you need to replace a computer or a network card but still use the original computer name. The *Last Connected* value can help you determine whether this is the case. Make sure that instances of the computer that are not in current use are unlicensed in Orchestrator so that they do not appear in WRA search results.



# Using the WRA Test Files for Troubleshooting

You can use the WRA test files if the issue is not covered in the [“Connection Issues” section on page 3-1](#). These files can provide you and Cisco Technical Support with useful information for where to start troubleshooting.

The test files are in the Inetpub\wwwroot\WRA directory.

## How to Use the Test Files

When you receive an error message or cannot run Wake Up for Remote Access, open a web browser, and enter the test file URL in the address bar. For example, *http://YourServerName/WRA/test file name*, where *test file name* is one of these:

- *test.html*—This HTML content is a simple success message. If it does not appear, the source of the issue is in IIS or your Internet connection.
- *test.aspx*—This file tests ASP.NET and the power management server connection. When you open this file, it displays the results of a series of tests.

The results tell you where the tests failed. For example, if *Result* shows *Connected*, but the *Permissions Test* shows *Failed*, you know that you have access to the power management server, but the current user does not have the required permissions on the power management server.





## APPENDIX **A**

### Important Notice

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- [Disclaimer, page A-1](#)
- [Statement 361—VoIP and Emergency Calling Services do not Function if Power Fails, page A-1](#)
- [Statement 1071—Warning Definition, page A-3](#)

### Disclaimer

Cisco EnergyWise enables you to reduce energy consumption in your network by turning off the power to devices when they are not in use. If IP phones are part of your network, they can also be turned off through EnergyWise, in which case calls cannot be made or received, and the phones cannot be turned on except by the network administrator or according to rules established in EnergyWise by the network administrator. Laws in the location of your network might require phones to remain available for emergencies. It is your responsibility to identify the laws which apply and to comply with them. Even in the absence of a law, we strongly recommend that you designate certain phones which will always be on and available to make and receive emergency calls. These phones should be clearly identified, and all employees or others who might require emergency access to make or receive calls should be informed of the availability of these phones.

### Statement 361—VoIP and Emergency Calling Services do not Function if Power Fails



**Warning**

**Voice over IP (VoIP) service and the emergency calling service do not function if power fails or is disrupted. After power is restored, you might have to reset or reconfigure equipment to regain access to VoIP and the emergency calling service. In the USA, this emergency number is 911. You need to be aware of the emergency number in your country.**

**Waarschuwing**

**Voice over IP (VoIP)-service en de service voor noodoproepen werken niet indien er een stroomstoring is. Nadat de stroomtoevoer is hersteld, dient u wellicht de configuratie van uw apparatuur opnieuw in te stellen om opnieuw toegang te krijgen tot VoIP en de noodoproepen. In de VS is het nummer voor noodoproepen 911. U dient u zelf op de hoogte te stellen van het nummer voor noodoproepen in uw land.**

<b>Varoitus</b>	<b>Voice over IP (VoIP) -palvelu ja hätäpuhelupalvelu eivät toimi, jos virta katkeaa tai sen syötössä esiintyy häiriöitä. Kun virransyöttö on taas normaali, sinun täytyy mahdollisesti asettaa tai määrittää laitteisto uudelleen, jotta voisit jälleen käyttää VoIP-palvelua ja hätäpuhelupalvelua. Yhdysvalloissa hätänumero on 911. Selvitä, mikä on omassa kotimaassasi käytössä oleva hätänumero.</b>
<b>Attention</b>	<b>Le service Voice over IP (VoIP) et le service d'appels d'urgence ne fonctionnent pas en cas de panne de courant. Une fois que le courant est rétabli, vous devrez peut-être réinitialiser ou reconfigurer le système pour accéder de nouveau au service VoIP et à celui des appels d'urgence. Aux États-Unis, le numéro des services d'urgence est le 911. Vous devez connaître le numéro d'appel d'urgence en vigueur dans votre pays.</b>
<b>Warnung</b>	<b>Bei einem Stromausfall oder eingeschränkter Stromversorgung funktionieren VoIP-Dienst und Notruf nicht. Sobald die Stromversorgung wieder hergestellt ist, müssen Sie möglicherweise die Geräte zurücksetzen oder neu konfigurieren, um den Zugang zu VoIP und Notruf wieder herzustellen. Die Notrufnummer in den USA lautet 911. Wählen Sie im Notfall die für Ihr Land vorgesehene Notrufnummer.</b>
<b>Avvertenza</b>	<b>Il servizio Voice over IP (VoIP) e il servizio per le chiamate di emergenza non funzionano in caso di interruzione dell'alimentazione. Ristabilita l'alimentazione, potrebbe essere necessario reimpostare o riconfigurare l'attrezzatura per ottenere nuovamente l'accesso al servizio VoIP e al servizio per le chiamate di emergenza. Negli Stati Uniti, il numero di emergenza è 911. Si consiglia di individuare il numero di emergenza del proprio Paese.</b>
<b>Advarsel</b>	<b>Tjenesten Voice over IP (VoIP) og nødanropstjenesten fungerer ikke ved strømbrydd. Etter at strømmen har kommet tilbake, må du kanskje nullstille eller konfigurere utstyret på nytt for å få tilgang til VoIP og nødanropstjenesten. I USA er dette nødnummeret 911. Du må vite hva nødnummeret er i ditt land.</b>
<b>Aviso</b>	<b>O serviço Voice over IP (VoIP) e o serviço de chamadas de emergência não funcionam se houver um corte de energia. Depois do fornecimento de energia ser restabelecido, poderá ser necessário reiniciar ou reconfigurar o equipamento para voltar a utilizar os serviços VoIP ou chamadas de emergência. Nos EUA, o número de emergência é o 911. É importante que saiba qual o número de emergência no seu país.</b>
<b>¡Advertencia!</b>	<b>El servicio de voz sobre IP (VoIP) y el de llamadas de emergencia no funcionan si se interrumpe el suministro de energía. Tras recuperar el suministro es posible que deba que restablecer o volver a configurar el equipo para tener acceso a los servicios de VoIP y de llamadas de emergencia. En Estados Unidos el número de emergencia es el 911. Asegúrese de obtener el número de emergencia en su país.</b>
<b>Varning!</b>	<b>Tjänsten Voice over IP (VoIP) och larmnummertjänsten fungerar inte vid strömbrott. Efter att strømmen kommit tillbaka måste du kanske återställa eller konfigurera om utrustningen för att få tillgång till VoIP och larmnummertjänsten. I USA är det här larmnumret 911. Du bör ta reda på det larmnummer som gäller i ditt land.</b>
<b>Figyelem</b>	<b>Az IP csatornán történő hangátvitel (VoIP) és a segélyhívó szolgáltatás nem működik, ha az áramellátás megszűnik vagy megszakad. Az áramellátás helyreállítását követően előfordulhat, hogy alaphelyzetbe kell állítani vagy újra kell konfigurálni a berendezést, hogy újra hozzáférhessen a VoIP és a segélyhívó szolgáltatáshoz. Az Egyesült Államokban a segélyhívó szám 911. Tisztában kell lennie a saját országának segélyhívó számával.</b>

Предупреждение	Служба передачи голоса по IP (VoIP) и служба экстренных вызовов не будут работать, если произошел сбой питания. После восстановления питания, возможно, потребуется перенастроить оборудование, чтобы возобновить доступ к службе VoIP и службе экстренных вызовов. В США телефон службы экстренных вызовов 911. Вам необходимо знать телефон этой службы в своей стране.
警告	如果电源出现故障或中断，您将无法使用 Voice over IP (VoIP) 服务与紧急呼叫服务。电源恢复之后，您可能需要重新设置或重新配置设备，以便重新获得进入 VoIP 与紧急呼叫服务的权限。在美国，此紧急呼叫号码是 911。您必须知道本国的紧急呼叫号码。
警告	電源障害や停電の場合、ボイス オーバー アイピー (VoIP) サービスと緊急呼出しサービスは機能しません。電源の回復後、VoIP と緊急呼出しサービスにアクセスするには機器をリセットまたは再設定する必要があります。米国内の緊急呼出し番号は 911 です。お住まいの地域の緊急呼出し番号をあらかじめ調べておいてください。

## Statement 1071—Warning Definition



### IMPORTANT SAFETY INSTRUCTIONS

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

### SAVE THESE INSTRUCTIONS

Waarschuwing

### BELANGRIJKE VEILIGHEIDSLINSTRUCTIES

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijke letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

### BEWAAR DEZE INSTRUCTIES

**Varoitus TÄRKEITÄ TURVALLISUUSOHJEITA**

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

**SÄILYTÄ NÄMÄ OHJEET****Attention IMPORTANTES INFORMATIONS DE SÉCURITÉ**

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

**CONSERVEZ CES INFORMATIONS****Warnung WICHTIGE SICHERHEITSHINWEISE**

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

**BEWAHREN SIE DIESE HINWEISE GUT AUF.****Avvertenza IMPORTANTI ISTRUZIONI SULLA SICUREZZA**

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

**CONSERVARE QUESTE ISTRUZIONI****Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER**

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

**TA VARE PÅ DISSE INSTRUKSJONENE**

**Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA**

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

**GUARDE ESTAS INSTRUÇÕES****¡Advertencia! INSTRUCCIONES IMPORTANTES DE SEGURIDAD**

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

**GUARDE ESTAS INSTRUCCIONES****Varning! VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

**SPARA DESSA ANVISNINGAR****Figyelem FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmeztető jel veszélyre utal. Sérülésveszélyt rejtő helyzetben van. Mielőtt bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplő figyelmeztetések fordítása a készülékhez mellékelte biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján kereshető meg.

**ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!****Предупреждение ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

**СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ**

**警告** 重要的安全性说明

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

**警告** 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

**주의** 중요 안전 지침

이 경고 기호는 위험을 나타냅니다. 작업자가 신체 부상을 일으킬 수 있는 위험한 환경에 있습니다. 장비에 작업을 수행하기 전에 전기 회로와 관련된 위험을 숙지하고 표준 작업 관례를 숙지하여 사고를 방지하십시오. 각 경고의 마지막 부분에 있는 경고문 번호를 참조하여 이 장치와 함께 제공되는 번역된 안전 경고문에서 해당 번역문을 찾으십시오.

이 지시 사항을 보관하십시오.

**Aviso** INSTRUÇÕES IMPORTANTES DE SEGURANÇA

**Este símbolo de aviso significa perigo. Você se encontra em uma situação em que há risco de lesões corporais. Antes de trabalhar com qualquer equipamento, esteja ciente dos riscos que envolvem os circuitos elétricos e familiarize-se com as práticas padrão de prevenção de acidentes. Use o número da declaração fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham o dispositivo.**

**GUARDE ESTAS INSTRUÇÕES****Advarsel** VIGTIGE SIKKERHEDSANVISNINGER

**Dette advarselssymbol betyder fare. Du befinder dig i en situation med risiko for legemeskade. Før du begynder arbejde på udstyr, skal du være opmærksom på de involverede risici, der er ved elektriske kredsløb, og du skal sætte dig ind i standardprocedurer til undgåelse af ulykker. Brug erklæringsnummeret efter hver advarsel for at finde oversættelsen i de oversatte advarsler, der fulgte med denne enhed.**

**GEM DISSE ANVISNINGER**



## تحذير

## إرشادات الأمان الهامة

يوضح رمز التحذير هذا وجود خطر. وهذا يعني أنك متواجد في مكان قد ينتج عنه التعرض لإصابات. قبل بدء العمل، احذر مخاطر التعرض للصدمة الكهربائية وكن على علم بالإجراءات القياسية للحيلولة دون وقوع أي حوادث. استخدم رقم البيان الموجود في آخر كل تحذير لتحديد مكان ترجمته داخل تحذيرات الأمان المترجمة التي تأتي مع الجهاز. قم بحفظ هذه الإرشادات

## Upozorenje

## VAŽNE SIGURNOSNE NAPOMENE

Ovaj simbol upozorenja predstavlja opasnost. Nalazite se u situaciji koja može prouzročiti tjelesne ozljede. Prije rada s bilo kojim uređajem, morate razumjeti opasnosti vezane uz električne sklopove, te biti upoznati sa standardnim načinima izbjegavanja nesreća. U prevedenim sigurnosnim upozorenjima, priloženima uz uređaj, možete prema broju koji se nalazi uz pojedino upozorenje pronaći i njegov prijevod.

## SAČUVAJTE OVE UPUTE

## Upozornění

## DŮLEŽITÉ BEZPEČNOSTNÍ POKYNY

Tento upozorňující symbol označuje nebezpečí. Jste v situaci, která by mohla způsobit nebezpečí úrazu. Před prací na jakémkoliv vybavení si uvědomte nebezpečí související s elektrickými obvody a seznamte se se standardními opatřeními pro předcházení úrazům. Podle čísla na konci každého upozornění vyhledejte jeho překlad v přeložených bezpečnostních upozorněních, která jsou přiložena k zařízení.

## USCHOVEJTE TYTO POKYNY

## Προειδοποίηση

## ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ

Αυτό το προειδοποιητικό σύμβολο σημαίνει κίνδυνο. Βρίσκεστε σε κατάσταση που μπορεί να προκαλέσει τραυματισμό. Πριν εργαστείτε σε οποιοδήποτε εξοπλισμό, να έχετε υπόψη σας τους κινδύνους που σχετίζονται με τα ηλεκτρικά κυκλώματα και να έχετε εξοικειωθεί με τις συνήθειες πρακτικές για την αποφυγή ατυχημάτων. Χρησιμοποιήστε τον αριθμό δήλωσης που παρέχεται στο τέλος κάθε προειδοποίησης, για να εντοπίσετε τη μετάφρασή της στις μεταφρασμένες προειδοποιήσεις ασφαλείας που συνοδεύουν τη συσκευή.

## ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ

## אזהרה

## הוראות בטיחות חשובות

סימן אזהרה זה מסמל סכנה. אתה נמצא במצב העלול לגרום לפציעה. לפני שתעבוד עם ציוד כלשהו, עליך להיות מודע לסכנות הכרוכות במעגלים חשמליים ולהכיר את הנהלים המקובלים למניעת תאונות. השתמש במספר ההוראה המסופק בסופה של כל אזהרה כדי לאתר את התרגום באזהרות הבטיחות המתורגמות שמצורפות להתקן.

## שמור הוראות אלה

**Opomena**      **ВАЖНИ БЕЗБЕДНОСНИ НАПАТСТВИЈА**  
 Символот за предупредување значи опасност. Се наоѓате во ситуација што може да предизвика телесни повреди. Пред да работите со опремата, бидете свесни за ризикот што постои кај електричните кола и треба да ги познавате стандардните постапки за спречување на несреќни случаи. Искористете го бројот на изјавата што се наоѓа на крајот на секое предупредување за да го најдете неговиот период во преведените безбедносни предупредувања што се испорачани со уредот.  
**ЧУВАЈТЕ ГИ ОВИЕ НАПАТСТВИЈА**

**Ostrzeżenie**      **WAŻNE INSTRUKCJE DOTYCZĄCE BEZPIECZEŃSTWA**  
 Ten symbol ostrzeżenia oznacza niebezpieczeństwo. Zachodzi sytuacja, która może powodować obrażenia ciała. Przed przystąpieniem do prac przy urządzeniach należy zapoznać się z zagrożeniami związanymi z układami elektrycznymi oraz ze standardowymi środkami zapobiegania wypadkom. Na końcu każdego ostrzeżenia podano numer, na podstawie którego można odszukać tłumaczenie tego ostrzeżenia w dołączonym do urządzenia dokumencie z tłumaczeniami ostrzeżeń.

**NINIEJSZE INSTRUKCJE NALEŻY ZACHOWAĆ**

**Upozornenie**      **DÔLEŽITÉ BEZPEČNOSTNÉ POKYNY**  
 Tento varovný symbol označuje nebezpečenstvo. Nachádzate sa v situácii s nebezpečenstvom úrazu. Pred prácou na akomkoľvek vybavení si uvedomte nebezpečenstvo súvisiace s elektrickými obvodmi a oboznámte sa so štandardnými opatreniami na predchádzanie úrazom. Podľa čísla na konci každého upozornenia vyhľadajte jeho preklad v preložených bezpečnostných upozorneniach, ktoré sú priložené k zariadeniu.

**USCHOVAJTE SI TENTO NÁVOD**

**Opozorilo**      **POMEMBNI VARNOSTNI NAPOTKI**  
 Ta opozorilni simbol pomeni nevarnost. Nahajate se v situaciji, kjer lahko pride do telesnih poškodb. Preden pričnete z delom na napravi, se morate zavedati nevarnosti udara električnega toka, ter tudi poznati preventivne ukrepe za preprečevanje takšnih nevarnosti. Uporabite obrazložitevno številko na koncu posameznega opozorila, da najdete opis nevarnosti v priloženem varnostnem priročniku.

**SHRANITE TE NAPOTKE!**

**警告**      **重要安全性指示**  
 此警告符號代表危險，表示可能造成人身傷害。使用任何設備前，請留心電路相關危險，並熟悉避免意外的標準作法。您可以使用每項警告後的聲明編號，查詢本裝置隨附之安全性警告譯文中的翻譯。  
 請妥善保留此指示